thirteen stations provide evidence of little change, since ten record no alteration —a result no doubt of the artificial protections.

"A gain is reported from Walton-on-the-Naze following the lengthening of the pier, and a loss from near Harwich Harbour, where the sea-wall is broken in, with local slips at Clacton at unguarded spots. Every station is protected, usually with sea-walls; while Harwich, Walton, Clacton, and the eastern side of Mersea Island are provided with groynes. Shingle is removed in small quantities from Harwich, Clacton, Colne Point, and from the southern side of the Blackwater River."

A map, showing the changes all round the British Coast, accompanies the original report.—F. W. RUDLER, F.G.S.

Post-Glacial Deposits of Walton Naze.—The interesting extract, given by Mr. Holmes on pp. 295-6, goes far to support the suggestion which I tentatively advanced in 1889 (ESSEX NAT., vol. liii., pp. 223-241) as to the possibly Post-glacial age of the upper clay and gravel capping the Naze cliff. The palæontological evidence wanted had in fact been found in 1803, and buried in the *Annual Register* till re-discovered by Mr. Holmes. This harmonizes all the East Essex gravels from Southend to Harwich (where doubtless the cliff-capping is of like age), an early deposit of the Thames, when its mouth was in a common estuary with all other East British and many West-European rivers.—W. H. DALTON, F.G.S.

METEOROLOGY.

Rainfall of 1903.—A letter from Dr. H. R. Mill, in the *Times* of Jan. 10, 1904, which, with tables, occupies more than two columns, gives the amount of the rainfall of 1903 as taken at 62 stations in all parts of the British Isles. Dr. Mill informs us that the rainfall was everywhere in excess of the averages. "The rainfall of London in 1903" (he remarks) "was greater by at least three inches than in any other year for which records exist, but a like unprecedented excess occurred at only a few of the stations outside the lower Thames valley." Considering the areas over which the percentage excesses were greatest, Dr. Mill finds that they were three in number: the south of England from about Swanage to near Brighton, running northward to include the whole of the Thames Basin, and extending beyond it northward from London. The second very wet area occupied North Wales and the west of Cheshire and Lancashire. The third lay in Scotland, north of the Caledonian Canal. "The

driest areas relative to the average, and probably the driest absolutely for the year, seem to have been in Norfolk and in a narrow strip running from south of Leicester through Lincoln to Hull. Here the excess was under 10 per cent." Dr. Mill states that "Over the British Isles as a whole the rainfall was certainly considerably more than 25 per cent. above the average, and England, Scotland, and Ireland differed little in the amount of the excess."

At Shoeburyness, the only Essex station mentioned, outside the London district, the rainfall was 29·52 in., the average from 1870 to 1899 having been 19·75 in. Within the London district the rainfall at Leyton (Lea-bridge road) in 1903 was 36·27 in.; at Greenwich Observatory 35·54 in.; at Camden Square 38·10 in.; and at the Victoria and Albert Museum, Kensington, 42·37 in.—T.V.H.

MISCELLANEA.

An Early Electrical Experiment in Essex.—The following incident in the life of Benjamin Wilson, F.R.S., the celebrated portrait-painter, father of General Sir Robert Wilson, may be of interest[1]:—"In 1747 Dr. Franklin published his discovery of the identity of lightning with electricity. Wilson's attention was immediately awakened. On the occurrence of the first succeeding thunderstorm he happened to be at the house of a friend near Chelmsford, in Essex, and at the moment was acting, with others, one of Shakespeare's plays. He was playing the part of Henry IV. when the storm came on, and running out in his royal robes he extemporised an apparatus to test the discovery—a curtain-rod inserted in a clean, dry quart bottle, with a pin (or needle) fastened to it at the other end. The bottle he held in his hand as he stood upon the bowling green, and the fluid was collected in the rod so that sparks were drawn from it by himself and all the rest. On the same day the same effects were observed by Mr. Canton in London, and this storm was the first occasion of the experiment being tried in England."

1 *Life of General Sir Robert Wilson*, by the Rev. Herbert Randolph, 1862, Vol. 1, p. 11.

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